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ABSTRACT

This second in a series of six learning modules on instructional evaluation is designed to give secondary and postsecondary vocational teachers help in assessing student performance as it relates to knowledge of the facts, data, related information, and procedures taught in their vocational courses. The terminal objective for the module is to assess student cognitive (knowledge) performance in an actual school situation. Introductory sections relate the competency dealt with in this module to others in the program and list both the enabling objectives for the nine learning experiences and the resources required. Materials in the learning experiences include required reading, self-check quiz, model answers, performance checklists, and the teacher performance assessment form for use in evaluation of the terminal objective. (The modules on instructional evaluation are part of a larger series of 100 performance-based teacher education (PBTE) self-contained learning packages for use in preservice or inservice training of teachers in all occupational areas. Each of the field-tested modules focuses on the development of one or more specific professional competencies identified through research as important to vocational teachers. Materials are designed for use by teachers, either on an individual or group basis, working under the direction of one or more resource persons/instructors.) (EM)

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ED149095

MODULE

D-2

Assess Student Performance: Knowledge

MODULE D-2 OF CATEGORY D—INSTRUCTIONAL EVALUATION
PROFESSIONAL TEACHER EDUCATION MODULE SERIES

The Center for Vocational Education

The Ohio State University

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NATIONAL INSTITUTE OF EDUCATION

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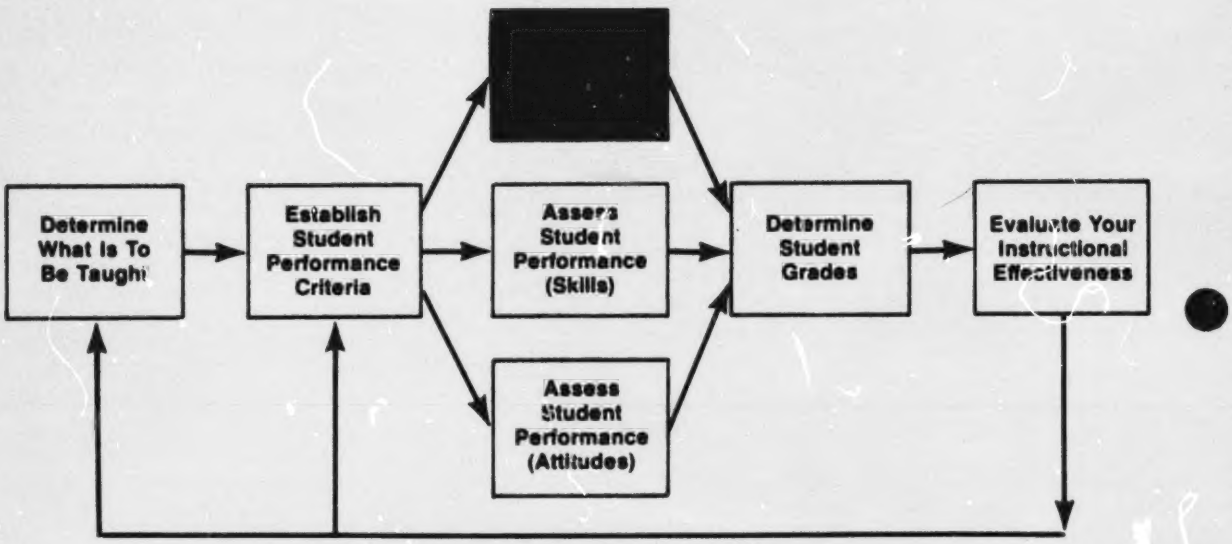

Determine What Is To Be Taught
Establish Student Performance Criteria
Assess Student Performance (Skills)
Assess Student Performance (Attitudes)
Determine Student Grades
Evaluate Your Instructional Effectiveness

INSTRUCTIONAL EVALUATION PROCESS

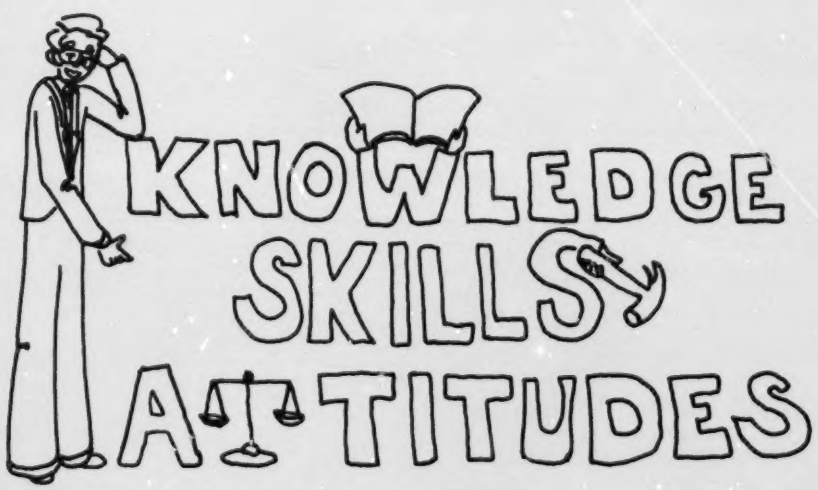
INTRODUCTION

If you want to know whether your students have learned what you expected them to learn, look at their behavior . . . their performance in the classroom or laboratory. To find out whether they have learned the required **facts, data, or information,** you can examine their performance on some type of written ("paper-and-pencil") test. To determine whether they have acquired the necessary **occupational skills and techniques,** you can observe their performance as they actually go through a manipulative process or use a certain machine. If you want to know whether your students have developed desirable **attitudes** about their occupations and peers in the world of work, you can observe their behavior, note what they say, or check their performance on an attitude scale. These three kinds of performance—**knowledge, skills, and attitudes**—take in everything teachers want to know about the progress of their students.

There are a number of good reasons why you want to check the performance of your students. Most obviously, in the process of evaluating student performance, you are gathering data which you can use for assigning course grades. At the same time, this evaluation provides feedback to students so they know how well they are doing in your program, and what they must do to improve. The results of student assessment will provide you with valuable information about the effectiveness of your own teaching—whether your students are learning, or whether you need to change your teaching strategies. Finally, assessment of student performance can be used for student placement (for example, to assign a student the next unit of work, or determine whether he/she has completed the occupational program).

It should be apparent that assessing student performance (testing) is really a learning process. Your students learn more about their subject and about themselves. You learn about the progress of your students, and at the same time, about yourself as a teacher. Constructing and administering tests should be approached in that light, not as a way of scoring points against your students.

In the three modules that cover assessment of student performance, the principles and practices of assessing the three areas of student learning (knowledge, skills, and attitudes) are covered. In this particular module, you will learn how to assess student performance as it relates to **knowledge** of the facts, data, related information, and procedures involved in your vocational courses. As you achieve competence in this area, you will be able to construct, administer, and score essay tests, oral tests, and objective tests such as true-false, multiple choice, and matching. This should lead to improved student performance and improved instruction.



ABOUT THIS MODULE

Objectives

Enabling Objectives:

1. After completing the required reading, demonstrate knowledge of the techniques and procedures for assessing student cognitive performance (*Learning Experience I*).
2. Using selected cognitive performance objectives, construct five multiple-choice test items to measure their achievement (*Learning Experience II*).
3. Using selected cognitive performance objectives, construct a matching item to measure their achievement (*Learning Experience III*).
4. Using selected cognitive performance objectives, construct five completion test items to measure their achievement (*Learning Experience IV*).
5. Using selected cognitive performance objectives, construct ten true-false test items to measure their achievement (*Learning Experience V*).
6. Using selected cognitive performance objectives, construct three essay test items to measure their achievement (*Learning Experience VI*).
7. Using a selected cognitive performance objective, construct one case study/problem-solving test item to measure its achievement (*Learning Experience VII*).
8. Using selected cognitive performance objectives, construct five oral test items to measure their achievement (*Learning Experience VIII*).

Resources

A list of the outside resources which supplement those contained within the module follows. Check with your resource person (1) to determine the availability and the location of these resources, (2) to locate additional references in your occupational specialty, and (3) to get assistance in setting up activities with peers or observations of skilled teachers, if necessary. Your resource person may also be contacted if you have any difficulty with directions, or in assessing your progress at any time.

Learning Experience I

Required

Reference: Green, John A. *Teacher-Made Tests*. Second Edition. New York, NY: Harper & Row Publishers, Inc., 1975.

Optional

Reference: *Making the Classroom Test: A Guide for Teachers*. Princeton, NJ: Educational Testing Service, 1969.

The filmstrip and accompanying record or tape, "Planning," Part I of the filmstrip series, *Making Your Own Tests*, Educational Testing Service, Cooperative Test Division, Princeton, New Jersey, n.d.

The filmstrip and accompanying record or tape, "Construction," Part II of the filmstrip series, *Making Your Own Tests*, Educational Testing Service, Cooperative Test Division, Princeton, New Jersey, n.d.

Filmstrip projector for viewing the filmstrips.

A screen for use with the projector.

A record player or tape recorder for listening to the accompanying records or tapes.

Learning Experience II

Required

Reference: Green, John A. *Teacher-Made Tests*. Second Edition. New York, NY: Harper & Row Publishers, Inc., 1975.

Optional

Reference: Micheels, William J. and M. Ray Karnes. *Measuring Educational Achievement*. New York, NY: McGraw-Hill Book Company, 1950.

Reference: *Multiple-Choice Questions: A Close Look*. Princeton, NJ: Educational Testing Service, 1963.

Peers to critique your multiple-choice test items.

Learning Experience III

Required

Reference: Green, John A. *Teacher-Made Tests*. Second Edition. New York, NY: Harper & Row Publishers, Inc., 1975.

Optional

Peers to critique your matching item.

Learning Experience IV

Required

Reference: Green, John A. *Teacher-Made Tests*. Second Edition. New York, NY: Harper & Row Publishers, Inc., 1975.

Optional

Peers to critique your completion test items.

Learning Experience V

Required

Reference: Green, John A. *Teacher-Made Tests*. Second Edition. New York, NY: Harper & Row Publishers, Inc., 1975.

Optional

Peers to critique your true-false test items.

Learning Experience VI

Required

Reference: Green, John A. *Teacher-Made Tests*. Second Edition. New York, NY: Harper & Row Publishers, Inc., 1975.

Optional

Reference: Bloom, Benjamin S. (Ed.). *Taxonomy of Educational Objectives, Handbook I: Cognitive Domain*. New York, NY: David McKay Company, Inc., 1956.

Peers to critique your essay test items.

Learning Experience VII

Optional

Peers to critique your case study/problem-solving test item.

Learning Experience VIII

Required

Reference: Green, John A. *Teacher-Made Tests*. Second Edition. New York, NY: Harper & Row Publishers, Inc., 1975.

Optional

Peers to critique your oral test items.

Learning Experience IX

Required

An actual school situation in which you can assess student cognitive (knowledge) performance.

A resource person to assess your competency in assessing student cognitive (knowledge) performance.

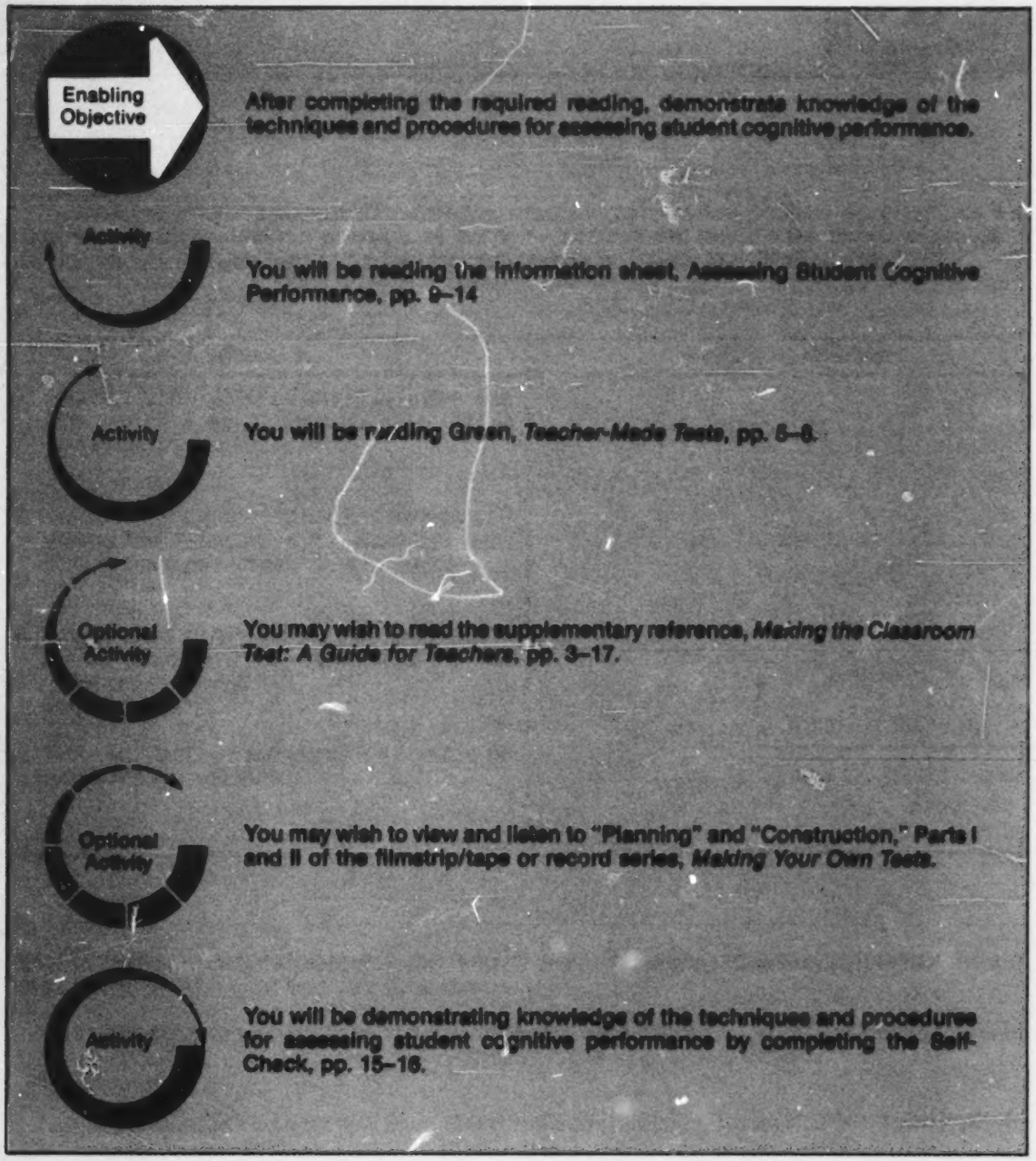
This module covers performance element numbers 142, 149–153, 156–160 from Calvin J. Cotrell *et al., Model Curricula for Vocational and Technical Education: Report No. V* (Columbus, OH: The Center for Vocational Education, The Ohio State University). The 384 elements in this document form the research base for all The Center's PBTE module development.

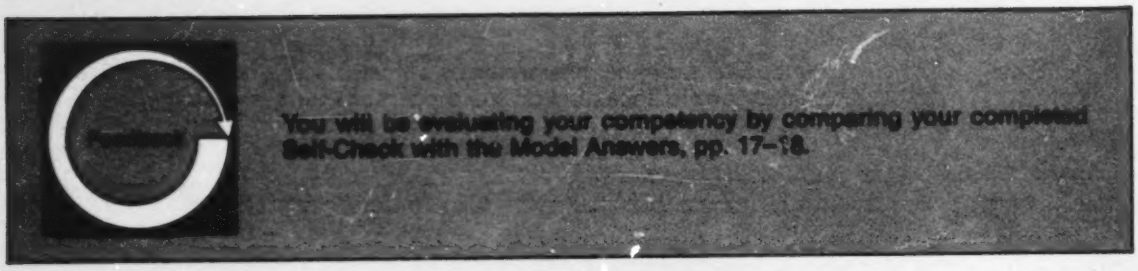
For information about the general organization of each module, general procedures for their use, and terminology which is common to all 100 modules, see About Using The Center's PBTE Modules on the inside back cover.

NOTES

Learning Experience I

OVERVIEW


Enabling Objective
After completing the required reading, demonstrate knowledge of the techniques and procedures for assessing student cognitive performance.
Activity
You will be reading the information sheet, Assessing Student Cognitive Performance, pp. 9–14
Activity
You will be reading Green, *Teacher-Made Tests*, pp. 5–6.
Optional Activity
You may wish to read the supplementary reference, *Making the Classroom Test: A Guide for Teachers*, pp. 3–17.
Optional Activity
You may wish to view and listen to "Planning" and "Construction," Parts I and II of the filmstrip/tape or record series, *Making Your Own Tests*.
Activity
You will be demonstrating knowledge of the techniques and procedures for assessing student cognitive performance by completing the Self-Check, pp. 15–16.


Feedback
You will be evaluating your competency by comparing your completed Self-Check with the Model Answers, pp. 17–18.

Activity

For information on the different types of tests used in assessing student cognitive performance, and on the procedures for constructing and administering these tests, read the following information sheet:

ASSESSING STUDENT COGNITIVE PERFORMANCE

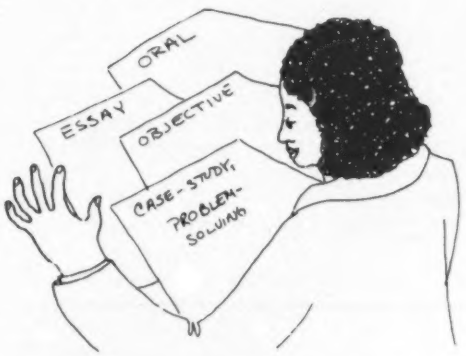
After you develop the student performance objectives for a unit or lesson,[1] you need to decide how you will evaluate each student's progress and performance in achieving these objectives. In this module, we are concerned with evaluating **cognitive** (knowledge) types of objectives.

Generally, the first step in the process of evaluating student achievement of cognitive objectives is to examine the objectives to determine what **level** of knowledge is to be evaluated. According to Bloom,[2] objectives in the knowledge domain (area) can be classified into a taxonomy—an orderly grouping of objectives into categories beginning with simple knowledge (e.g., recall of facts) and progressing through more and more complex levels of knowing (e.g., evaluation of a decision). Thus, if the objective were to "identify the parts of an internal combustion engine," you would classify it as a lower-level objective involving simple recognition and recall.

The second step is to determine what evaluation technique(s) (tests, questionnaires, checklists, rating scales, etc.) to use to measure student progress toward achieving the objective. An objective involving simple recall of facts would obviously require a different type of evaluation technique than an objective requiring the student to analyze and/or evaluate a situation or solve a problem.

Types of Tests

Achievement in the area of knowledge is usually measured by tests—objective, essay, case study/problem-solving, or oral. The **objective** type of test is most widely used today. The following types of items can make up the objective test:



- True-false
- Listing
- Matching
- Completion
- Multiple-choice

Later learning experiences in this module will elaborate on the levels of knowledge that each of these items best evaluates and will provide construction details. For example, true-false items are one good means of determining if a student knows certain facts. True-false items are not, however, very effective indicators of a student's ability to apply knowledge.

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1. To gain skill in developing student performance objectives, you may wish to refer to Module B–2, *Develop Student Performance Objectives*. For information concerning the establishment of the performance criteria which underlie your measurement of student achievement, you may wish to refer to Module D–1, *Establish Student Performance Criteria*.
2. Benjamin S. Bloom (Ed.), *Taxonomy of Educational Objectives, Handbook I: Cognitive Domain* (New York, NY: David McKay Company, Inc., 1956).

Essay (or written) test items can be worded so as to determine a student's—

- comprehension of certain information
- ability to analyze elements
- ability to make judgments from certain conditions, known facts, etc.

An essay item can be stated in question form as well as problem form. Caution has to be taken in using the essay test, for many times what one is really evaluating is a student's ability to write.

The **oral** type of examination can be used when you want an individual student to solve a problem, speculate about a new situation, discuss relationships, etc.—the higher levels of knowledge. The oral test items, along with an answer key, should be written by the teacher prior to conducting the examination. Oral tests are very time-consuming, because responses are given by each student one at a time. They may also be invalid unless each student answers each question. This implies that oral examinations should be conducted individually between one student and one teacher.

The **case study/problem-solving** type of test is excellent for measuring achievement of the higher level of cognitive objectives. Performance in the cognitive area involves manipulating knowledge rather than the physical manipulation involved in the psychomotor area. Most case study and problem-solving items require students to apply, analyze, synthesize, and/or evaluate data and concepts in order to derive solutions to problems or make recommendations for handling particular situations effectively.

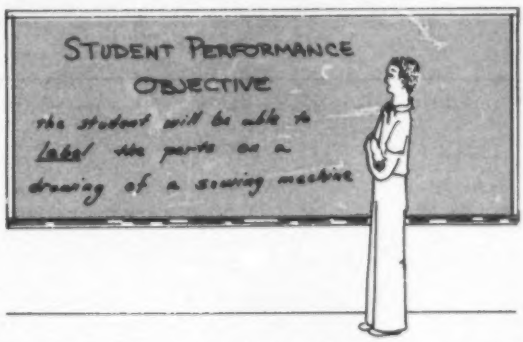
Constructing a Test

None of these various evaluation techniques is valuable unless (1) it is in a form that truly evaluates the learning specified in the objective, (2) the rules for constructing the items are followed, (3) an inflexible key is developed prior to the administration of the test, and (4) the environment for taking the test is controlled. The inflexible key is of greatest importance in the oral, essay, and case study/problem-solving types of tests, because these lend themselves to subjectivity (personal judgment regarding the value of responses).

A good test has six characteristics. It is a **valid** test (it measures what it is supposed to measure—achievement of student performance objectives). It is **reliable** (it accurately and consistently measures what it is supposed to measure). It is **objective** and **fair** to all students (everyone has equal opportunity to reveal what they have learned). It is **discriminating** (students who really made greater progress in achieving the objectives are revealed). A good test is **comprehensive** (it covers all of the objectives in the unit and/or lesson). And finally, it is **easy to use** in terms of administration and scoring.

Good tests are difficult to construct. Often, in an effort to achieve one characteristic, we end up with a conflict with another characteristic. For example, the test may be long enough to make it **comprehensive;** but, it may not be **reliable** because slow readers may not be able to complete it. A few tips regarding each of the characteristics follow.

Validity.—To ensure that the test will be valid (measures what it is supposed to), start by examining the student performance objectives. Always



check the action verb in the objective (the part of the objective that states what the student will be doing) before deciding how best to evaluate/measure the achievement. Many teachers develop test items that measure only the recall and recognition levels of knowledge, while the objectives call for the student to apply knowledge.

You should also make sure that the test measures achievement only in your area of specialization, not knowledge that is generally known. A good technique to use to help prevent this from happening is to ask students that are not enrolled in your class to take the test or take some items from the test. If their responses are correct, you

may be measuring general knowledge rather than achievement of the intended student performance objectives.

When developing teacher-made tests, content validity (the degree to which a test gathers data relevant to the performance objectives) is very important. A technique that can be used to verify the content validity of a test is to ask another qualified person (fellow teacher or administrator) to review the performance objectives and the test items developed to see how well they match. Ask the reviewer to check to see whether the items reflect the main intent of the objectives. To facilitate this review and verification process, you should provide the reviewer with a copy of your lesson plans and any other materials used to help students achieve the objectives being assessed.

Reliability.—The reliability of a test (it measures accurately and consistently what it is supposed to measure) is directly related to the validity of a test. If a test is valid it is probably reliable. However, the following factors may also influence a test's reliability.

- How long the test is. For example, if the test is so long that students do not have time to complete it, it is not a reliable measure of what the students know.
- How clear and objective the items are. For example, ambiguous items—those that can be interpreted in more than one way—are not reliable indicators of how well students know the material.
- How simple and straightforward the directions are. If students cannot understand what they are being asked to do, quite obviously the test is unreliable.
- How objective the scoring is. For example, if the test does not have an inflexible key for scoring, a particularly sloppy paper may cause a teacher to take off points for errors that have nothing to do with the objectives being evaluated.

- How emotionally and physically ready the students are. If a student is upset, or feeling ill, the test may not provide a reliable indication of whether he/she has achieved the objective(s) in question.

Teachers can use three nonstatistical methods to enhance the reliability of a test. One is to have two equivalent forms of the same test. However, very few teachers use this method, because it is difficult to construct equivalent tests for the same objectives. Another method is to give the same test a second time, allowing very little time between the two administrations. This is effective, but it does take additional class time and allows **some** students to learn from the first test. The third method is to divide one test into two equivalent parts. One sub-test consists of the even-numbered items, and one sub-test contains the odd-numbered items. The number of items on the original test may have to be increased to ensure the sub-tests will contain sufficient items to cover the objectives of the unit or lesson. The sub-test forms (even and odd) should be assigned to students randomly.

Objectivity.—As teachers, we tend to respond to students who respond positively to our teaching. To ensure as much objectivity as possible in a test, every effort must be made to make the test fair for each individual student. There are two factors that directly influence the objectivity of a good test: (1) the method the teacher uses in grading the test, and (2) the interpretation the student gives to the directions and the individual test items.

To be objective in the grading process, you should develop an inflexible scoring key prior to giving the test. This key is rather simple to construct for true-false, completion, listing, and multiple-choice types of items. It is more difficult to develop for essay and case study/problem-solving items. The responses which will receive full credit in the essay and case study/problem-solving types of items must be outlined, as well as the credit that will be given for the total and varying proportions of a complete response. If a misspelled word means that a student doesn't know the concept, this must be made clear in the item.

Good directions and test items lend themselves to only one interpretation by students. If the student has to guess what the teacher wants as an answer, then the fairness of the item, and probably the test, must be questioned. If the test is not objective, it is also not valid and not reliable. To ensure that the directions are clear, ask a student in your class to read the directions and explain what they mean. Revise them if they are misunderstood or inadequate.

Discrimination.—A good test reveals the progress each student made toward achieving the objectives. Unless you have a class of special students, the tests you give to your students should reveal a reasonable range in the scores between the student knowing the most and the student knowing the least. Such tests are said to be **discriminating.** The total test is discriminating if the items within the test discriminate.

You will need to do an item analysis to determine if an item is discriminating or not. If you have a class of 24 students, analyze the tests completed by the six students scoring highest on the exam and the tests completed by the six students scoring lowest. Fill in a form for all test items. (See Sample 1.) According to the data in Sample 1, items six and eight need to be revised, and item nine needs to be moved closer to the end of the test. If you wanted some easy items at the beginning of the test, you could use item six.

SAMPLE 1

TEST ITEM ANALYSIS

Item Number	Upper Quarter Tests (6)			Lower Quarter Tests (6)			Item Description
	Number Correct	Number Wrong	No Answer	Number Correct	Number Wrong	No Answer	
6	6	0	0	6	0	0	Easy Item
7	5	1	0	1	4	0	Discriminating
8	1	5	0	4	1	1	Reverse; Needs revision
9	4	1	1	6	0	0	Difficult

Comprehensiveness.—The comprehensiveness of a good test is judged by the thoroughness with which the student performance objectives are represented by test items. Another way of expressing this idea is to be sure that the sample of test items adequately evaluates the objectives. There is no formula for judging a test's comprehensiveness. Rather, you will just have to ask yourself if you think this test is long enough, if the test items are appropriate for the objectives, and if all the objectives are adequately evaluated.

There are some general steps in constructing a test that aid in creating a good test. The **first step** is to list the objectives the achievement of which you want this test to evaluate. These objectives should be found in your unit and/or lesson plans. The **second step** is to examine the content in the unit and/or lesson plans to determine if additional objectives are needed.

The **third step** is to look at each objective in terms of expected student outcomes. To do this, you may want to use a test grid such as the one in Sample 2. This involves listing the objectives in the left-hand column and underlining the action verb in the objective. The **fourth step** is to specify the method of evaluating each objective and the percent of grade this objective will comprise. (See Sample 2.)

SAMPLE 2

TEST GRID

Objectives	Methods for Evaluating	Percent of Grade
The student **recognizes** the circular nature of the economy.	Objective type items such as modified true-false, multiple-choice.	5
The student **interprets** a model which represents the circular flow of goods, services, and money.	Essay and problem-solving/case study type of items.	10

The **fifth step** is to construct the evaluation items you have specified for the different objectives. You may need to construct more than one item for each objective. Keep in mind that it is also best to use no more than three or four different types of items on a single test.

The **sixth step** is to assemble all like items together and try to organize each section from easy to more difficult, as logically as possible. Now, you are ready to write directions for each of the different evaluation forms or methods you have—the **seventh step**. The directions should include what the student is to do, how it is to be done, and where the response is to be recorded. Let the test "cool off," then reread it for revision purposes. At this point, the key for scoring should be constructed. After the test is administered, you can analyze the results to determine how good the test is and to start a card file of test items to use in the future.

Administering and Scoring a Test

In the administration and scoring of the test, the objective is to emphasize fairness to each student. Here are a few practices that aid in conducting a fair test. Prepare the test far enough in advance so that (1) copies can be made for each student, (2) time estimates can be made for completing each section and this information added to the test, (3) directions for completing the different types of items can be tried out and modified as needed, and (4) the key for scoring can be made out.

When the test is administered, create an atmosphere that allows students to concentrate on taking the test. See that the room is reasonably quiet and free from distractions, that the temperature is comfortable, and that the lighting is adequate. Give any instructions prior to handing out the tests. Explain the purpose of the test, how it will be graded, and any instructions for taking it not included in the written directions. You may want to

have students raise their hands when help is needed, and then move in response to their request rather than have the students come to you.

In scoring the test, you can be more efficient and fairer if you check the whole test a section at a time. For example, if the test is composed of 30 multiple-choice items, 20 listing items, and 10 essay items, correct all of the multiple-choice items, then the listing items, and finally each of the essay items one by one.

For further information on classroom testing and general principles of test construction, read Green, *Teacher-Made Tests*, pp. 5–8.

For further information on classroom testing, you may wish to read *Making the Classroom Test: A Guide for Teachers*, pp. 3–17.

For further insight into constructing tests, you may wish to view and listen to "Planning" and "Construction," Parts I and II of the filmstrip/tape or record series, *Making Your Own Tests*.

The following items check your comprehension of the material in the information sheet, Assessing Student Cognitive Performance, pp. 9–14.

SELF-CHECK

I. Case Situations:

In the left-hand column below are four statements made by hypothetical teachers which indicate their need to evaluate student performance. In the right-hand column, indicate the type(s) of evaluation techniques which would be appropriate for each teacher to use for the situation described.

Situation	Evaluation Solution
1. Teacher: "John spilled oil on the shop floor and didn't clean it up. Doesn't he know this is dangerous?"	
2. Teacher to Teacher: "I spend half my time correcting the threading of the machines even though I've demonstrated how to do it."	
3. Teacher: "John, why did you ship your hogs to market yesterday? Did you listen to the livestock price reports?"	
4. Teacher: "Jane, try not to call the carriage return a 'thingumabob.'"	

II. Critique:

Read the following description of one teacher's approach to assessing student cognitive performance, and **critique in writing** the teacher's performance.

Ms. Lewis gave a unit test on the "Alternatives to the Gasoline Piston Engine for Automobiles." She had given no other tests during the unit. The objectives of the unit were as follows:

The student will be able to—

1. draw a simple technical sketch of the mechanical layout of each of the six alternative power plants
2. explain the basic principles of operation of each
3. pass an objective test on the primary advantages and disadvantages of each for automotive use
4. define the technical terms new to these engines

The unit test consisted of an essay question in which students were asked to evaluate each of the alternative power plants and select the best one. No other directions were given. Although she hadn't had time to make up a grading key, Ms. Lewis knew what she was looking for—electric cars were obviously the wave of the future.

During the test, Ms. Lewis had to close the windows to shut out the noise of the band rehearsal for the state championship football game that evening. The students seemed a little restless, but otherwise things went well. Everyone finished in the specified time, and Ms. Lewis started grading the tests during her free period.

Compare your completed written responses on the Self-Check with the Model Answers given below. Your responses need not exactly duplicate the model responses; however, you should have covered the same **major** points.

MODEL ANSWERS

I. Case Situations:

1. The teacher could give John an oral test and ask him to state the safety regulations for a school shop. If John doesn't state the need to keep the shop floor clean, then the teacher will have to teach John this information. **Or,** the teacher could give John a listing type of test item where John would be asked to list the safety rules in a school shop.
2. The teacher could give each member of the class a picture of a sewing machine with instructions to draw a line showing how a machine is threaded by numbering and naming each sequential step starting with spool pin #1. **Or,** the teacher could give them a listing type of objective test item where the students are given directions to name the parts of the sewing machine in the proper sequence for threading the machine.
3. Here the teacher may want to discover if John really knows the reliable sources of market prices for stock. The teacher could use a listing type of objective test item. **Or,** the teacher could construct a problem-solving type of item where the responses would require John to know the reliable sources. **Or,** the teacher could make up a completion type of objective test item. **Or,** the teacher could simply ask him (an oral test).
4. Does Jane know the name? The teacher could ask her (oral test). **Or,** the teacher could give Jane a drawing of a typewriter and ask her to identify the main parts by listing their appropriate names.

II. Critique:

Ms. Lewis' students will undoubtedly complain that the test was **not fair** and, based on the information given about Ms. Lewis' approach, we would have to agree with them. Her test does not appear to be valid, reliable, or objective.

The central problem lies in Ms. Lewis' apparent failure to examine the student performance objectives for the unit and develop a test specifically designed to measure achievement of those objectives. None of the objectives calls for students to apply, analyze, or synthesize, or to **evaluate** the various alternatives and make a judgment. All the objectives involve lower levels of knowing.

Since no other tests were given during the unit, Ms. Lewis has no other evidence to go on as to whether students have acquired the **basic facts** concerning the six power plants. Based on the stated objectives, students might have expected some completion, matching, multiple-choice, or true-false items to determine whether they knew the essential information.

An essay test can, of course, be designed to reveal students' achievement of lower-level objectives. But, this particular essay test is designed to measure students' achievement of an objective which was never stated and for which there is no indication that students were prepared.

If students had been prepared to evaluate, then Ms. Lewis could have used this essay question to reveal whether they had acquired the basic information covered in the four unit objectives. To do so, however, she would have needed to give students very **clear directions** as to what she was looking for—the scope and detail of an acceptable answer. For example, she could have explained (in the written directions, or orally prior to the test) that in justifying their selection of the best alternative, students should discuss the advantages and disadvantages of each.

Even with clear directions, however, the test will not be an **objective, fair,** indication of what students know unless Ms. Lewis develops an inflexi-

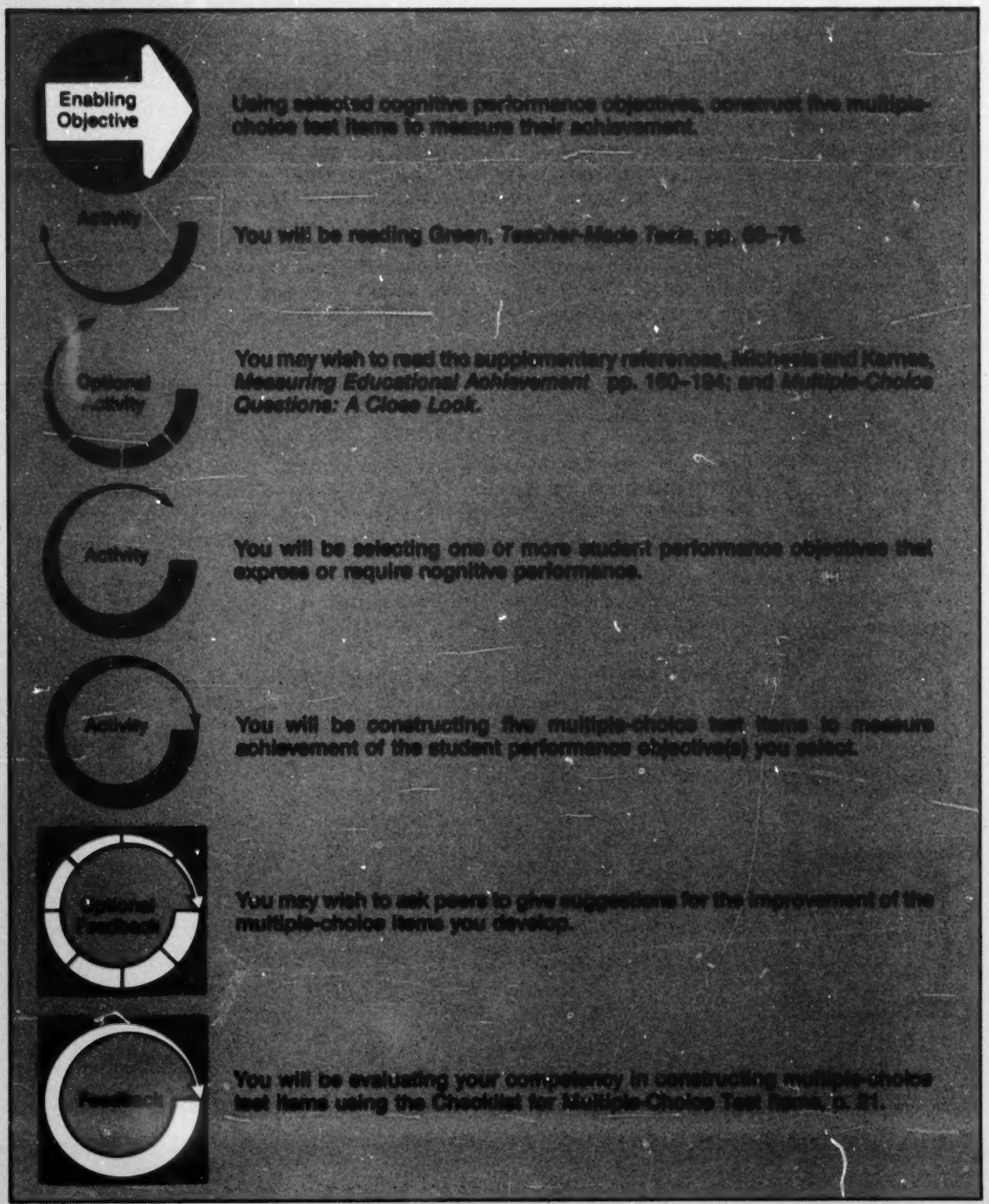
ble scoring key to guide her in grading the responses. Her criterion (the electric car is the best choice) for evaluating students' answers is much too subjective, and completely ignores giving credit for knowing the essential information about the six alternatives.

Finally, Ms. Lewis picked a poor day and time to give the unit test—the only test. Students were distracted by the noise from the band rehearsal, and many may have had a hard time concentrating on automobile engines with the state football championship on the line that evening. Thus, the test may not be a reliable indicator of what these students know about the subject.

LEVEL OF PERFORMANCE: For parts I and II, your completed Self-Check should have covered the same **major** points as the model responses. If you missed some points or have questions about any additional points you made, review the material in the information sheet, Assessing Student Cognitive Performance, pp. 9–14, or check with your resource person if necessary.

Learning Experience II

OVERVIEW


Enabling Objective
Using selected cognitive performance objectives, construct five multiple-choice test items to measure their achievement.
Activity
You will be reading Green, *Teacher-Made Tests*, pp. 68–76.
Optional Activity
You may wish to read the supplementary references, Michaels and Karnes, *Measuring Educational Achievement* pp. 180–194; and *Multiple-Choice Questions: A Close Look.*
Activity
You will be selecting one or more student performance objectives that express or require cognitive performance.
Activity
You will be constructing five multiple-choice test items to measure achievement of the student performance objective(s) you select.
Optional Feedback
You may wish to ask peers to give suggestions for the improvement of the multiple-choice items you develop.
Feedback
You will be evaluating your competency in constructing multiple-choice test items using the Checklist for Multiple-Choice Test Items, p. 21.

For information regarding the construction of multiple-choice test items, read Green, *Teacher-Made Tests*, pp. 68–76.

For additional information and guidelines for writing multiple-choice test items, you may wish to read Micheels and Karnes, *Measuring Educational Achievement* pp. 160–194; and *Multiple-Choice Questions: A Close Look.*

Select one or more student performance objectives in your occupational specialty that express or require cognitive learning, and that lend themselves to the use of multiple-choice items to measure their achievement. (If you need help in identifying performance objectives that require or express cognitive performance, check with your resource person.)

Construct five multiple-choice test items to measure achievement of the student performance objective(s) you selected. Number each test item for easy reference during feedback. Include directions and a scoring key.

You may wish to ask one or more of your peers who have taken or are taking this module to critique the multiple-choice items you have constructed. Discuss any suggested changes, and then make any necessary revisions.

After you have constructed your multiple-choice items, use the Checklist for Multiple-Choice Test Items, p. 21, to evaluate your work.

CHECKLIST FOR MULTIPLE-CHOICE TEST ITEMS

Directions: Place an X in the YES or NO box to indicate whether **all** test items met or did not meet each criterion. For any test item(s) which did not meet a criterion, specify the number(s) of the item(s) in the space provided for comments. If criterion #4 is not applicable, place an N/A in the space provided for comments.

Name _____

Date _____

Resource Person _____

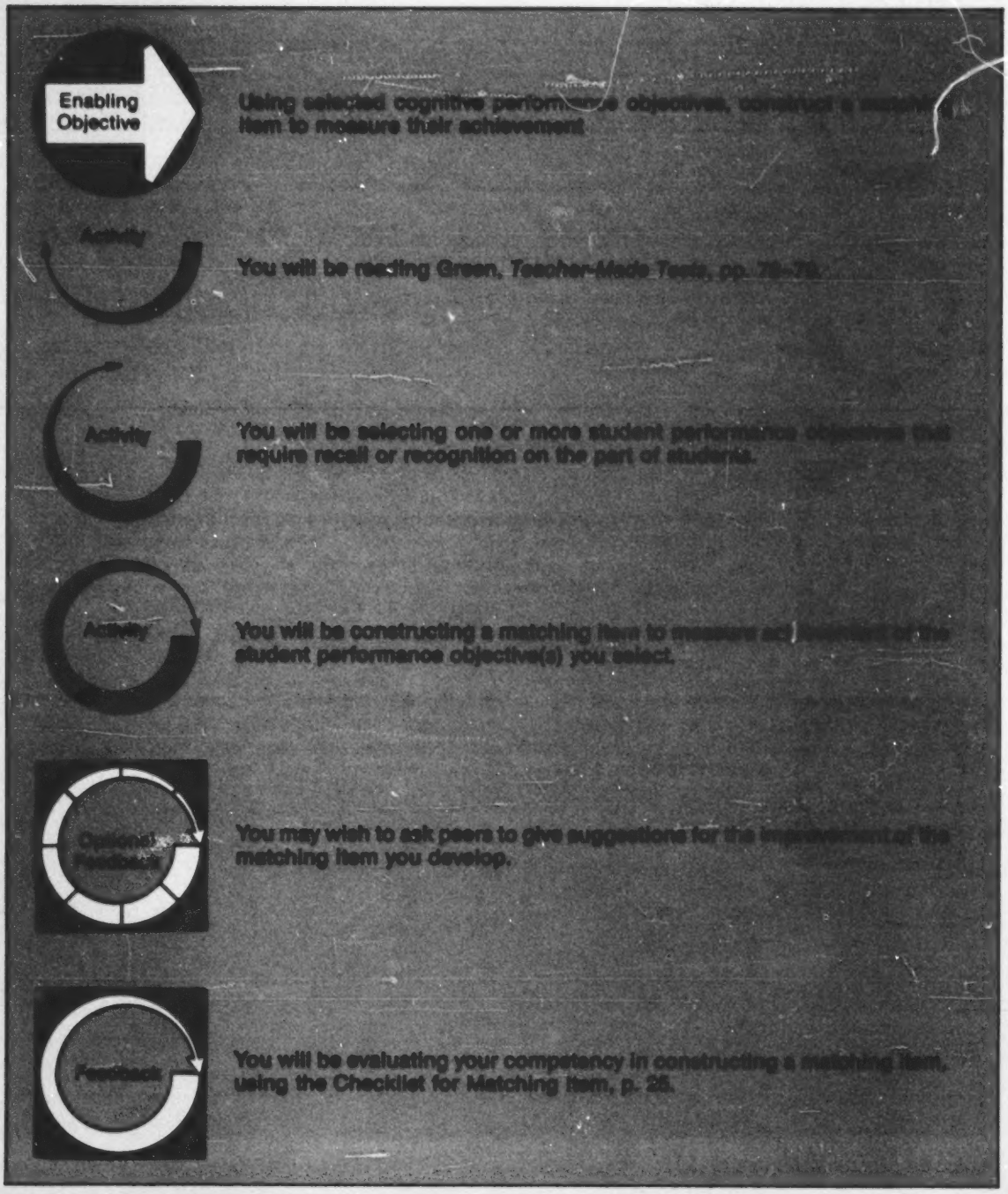
	Yes	No	Comments
The multiple-choice test items meet the following criteria:			
1. The central question or problem is stated in the stem of each item		☐	
2. The response choices for each item are grammatically correct		☐	
3. All the response choices within each item are approximately the same length		☐	
4. Authority(ies) are quoted when the problem contains controversial opinions		☐	
5. There are no ambiguous statements in the stems or the choices		☐	
6. All the choices for each item are feasible		☐	
7. The items are written at the language level of the students		☐	
8. The items are constructed so that clues cannot be obtained from other items		☐	
9. The items are constructed to measure the level of knowledge specified in the objective(s)		☐	

LEVEL OF PERFORMANCE: All applicable items must receive YES responses. If any item receives a NO response, review *Green, Teacher-Made Tests*, pp. 68–76, revise your work accordingly, or check with your resource person if necessary.

NOTES

Learning Experience III

OVERVIEW


Enabling Objective
Using selected cognitive performance objectives, construct a matching item to measure their achievement.
Activity
You will be reading Green, Teacher-Made Tests, pp. 78–79.
Activity
You will be selecting one or more student performance objectives that require recall or recognition on the part of students.
Activity
You will be constructing a matching item to measure achievement of the student performance objective(s) you select.
Optional Feedback
You may wish to ask peers to give suggestions for the improvement of the matching item you develop.
Feedback
You will be evaluating your competency in constructing a matching item, using the Checklist for Matching Item, p. 25.

For information on constructing matching items, read Green, *Teacher-Made Tests*, pp. 76–78.

Select one or more student performance objectives in your occupational specialty that require recall or recognition on the part of students.

Construct a matching item to measure achievement of the student performance objective(s) you selected. Include directions and a scoring key.

You may want to ask one or more of your peers who have taken or are taking this module to critique the matching item you have constructed. Discuss any suggested changes, and then make any necessary revisions.

After you have constructed your matching item, use the Checklist for Matching Item, p. 25, to evaluate your work.

CHECKLIST FOR MATCHING ITEM

Name _____

Date _____

Resource Person _____

Directions: Place an X in the YES or NO box to indicate whether the test item met or did not meet each criterion. For criterion #6, place an N/A in the YES box if the criterion is not applicable.

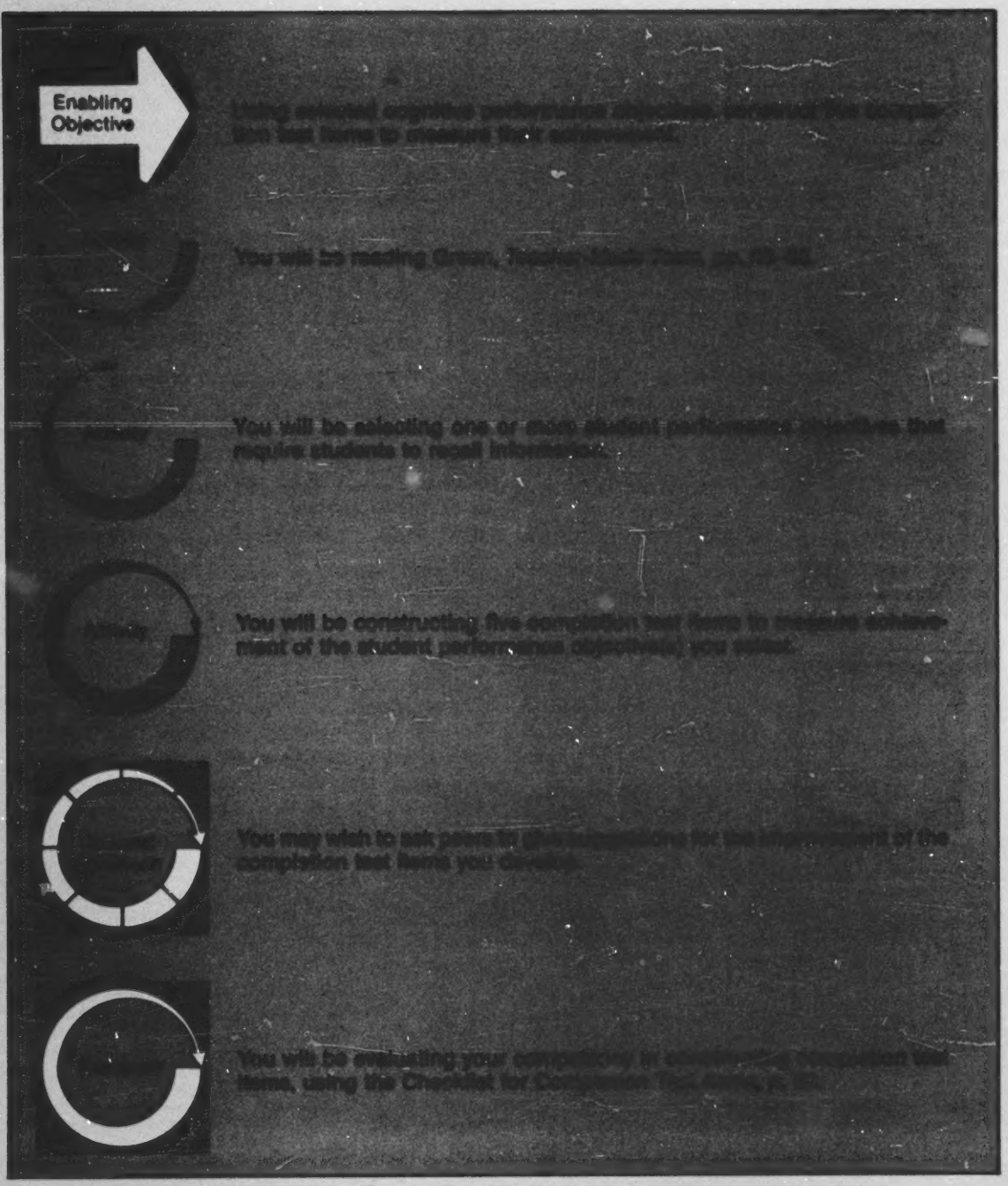
The matching item meets the following criteria:	Yes	No
1. Only similar premises and similar responses are grouped within the item	☐	☐
2. There are not less than five and not more than 15 responses in the item	☐	☐
3. Premises are arranged for maximum clarity and convenience for the student	☐	☐
4. The responses are alphabetically or chronologically arranged	☐	☐
5. The directions clearly indicate the basis for matching	☐	☐
6. Real materials, pictures, drawings, or models are used when practical	☐	☐
7. Perfect one-to-one matching in the arrangement of premises and responses is avoided	☐	☐
8. All the premises and responses are on one page	☐	☐
9. There are more responses than premises, or single responses can be used to answer more than one premise	☐	☐

LEVEL OF PERFORMANCE: All applicable items must receive YES responses. If any item receives a NO response, review Green, *Teacher-Made Tests*, pp. 76–78, revise your work accordingly, or check with your resource person if necessary.

NOTES

Learning Experience IV

OVERVIEW



For information on constructing completion test items, read Green, *Teacher-Made Tests*, pp. 58–63. Please note the different forms that completion test items can take.

Select one or more student performance objectives in your occupational specialty that require a student to recall information.

Construct five completion test items to measure achievement of the student performance objective(s) you selected. Number each test item for easy reference during feedback. Include directions and a scoring key.

You may want to ask one or more of your peers who have taken or are taking this module to critique the completion test items you have constructed. Discuss any suggested changes, and then make any necessary revisions.

After you have constructed your completion test items, use the Checklist for Completion Test Items, p. 29, to evaluate your work.

CHECKLIST FOR COMPLETION TEST ITEMS

Directions: Place an X in the YES or NO box to indicate whether **all** test items met or did not meet each criterion. For any test item(s) which did not meet a criterion, specify the number(s) of the item(s) in the space provided for comments. If criteria #1, #2, or #4 are not applicable, place an N/A in the space provided for comments.

Name _____

Date _____

Resource Person _____

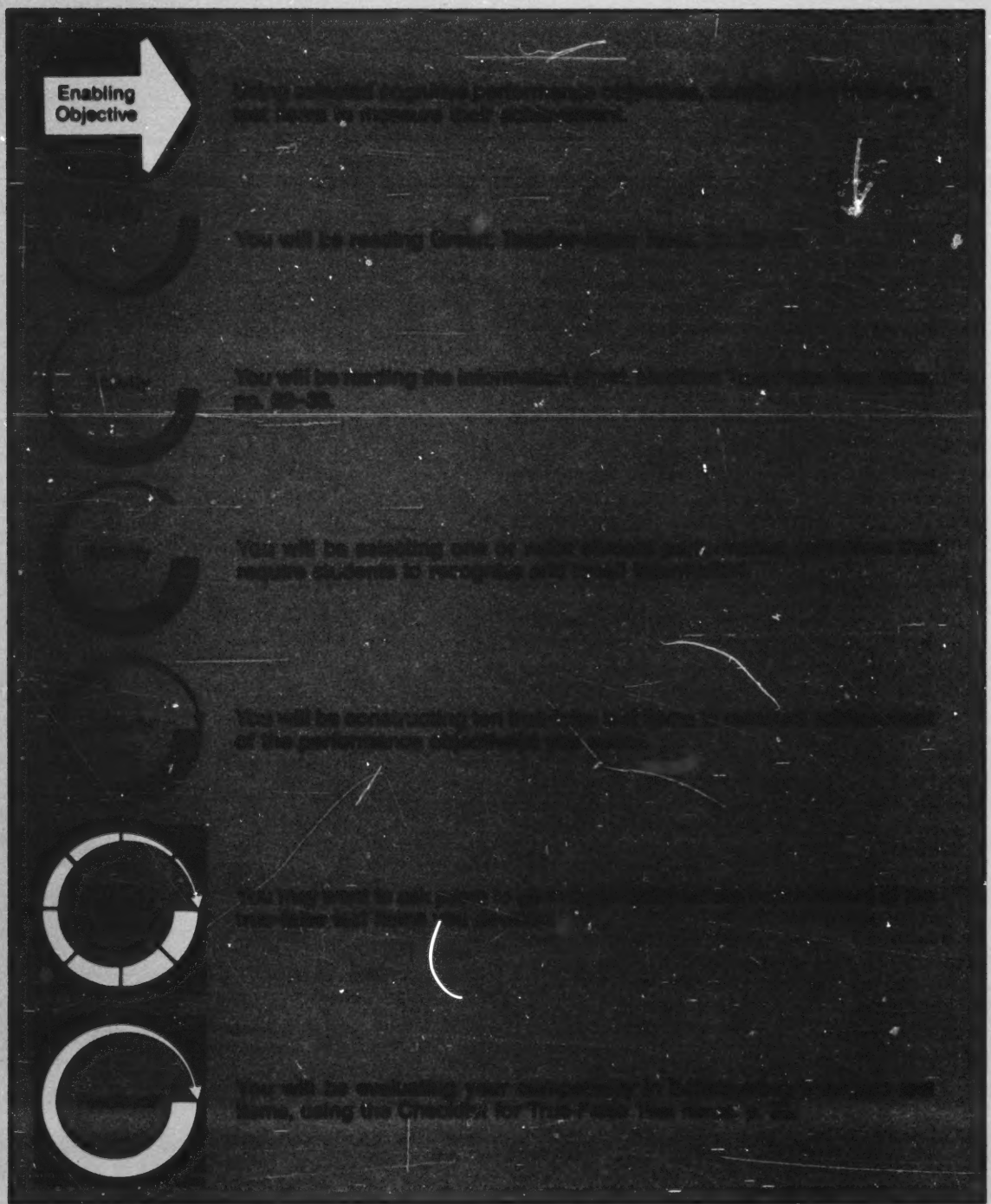
The completion test items meet the following criteria:	**Yes**	**No**	**Comments**
1. Only significant words are omitted in incomplete sentence items		☐	
2. Enough clues are left in incomplete sentence items so that the required responses make sense to the students		☐	
3. There are no grammatical clues to reveal the correct responses or answers		☐	
4. If incomplete sentences are used, all the blanks are the same length		☐	
5. The omitted phrases or words are of comparable importance among the items		☐	
6. Any question asked is explicit enough to evoke the correct type of response		☐	
7. Direct quotes from a textbook are avoided		☐	

LEVEL OF PERFORMANCE: All applicable items must receive YES responses. If any item receives a NO response, review Green, *Teacher-Made Tests*, pp. 58–63, revise your work accordingly, or check with your resource person if necessary.

NOTES

Learning Experience V

OVERVIEW



For information on constructing true-false test items, read Green, *Teacher-Made Tests*, pp. 63–68.

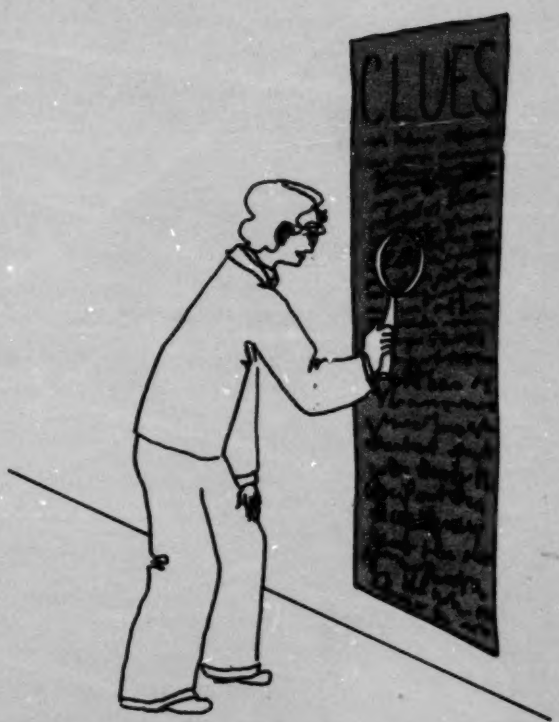
For information on a modification of true-false test items, read the following information sheet:

MODIFIED TRUE-FALSE TEST ITEMS

Because responding to regular true-false items often becomes a kind of guessing game for students, **modified true-false items** are often used when recall and recognition of information are being measured. There are many methods for modifying true-false items. The main disadvantage is in the grading of the items, in that more time is required.

The modification consists of asking the student to correct or give the right response to any false item. The value in the modification is that the student is required not only to recognize a false statement, but to recall the **correct** response—which is what we desire in education.

Two forms of this modification are illustrated in Samples 3 and 4. In Sample 3, no clues for the correct response are given. In Sample 4, each true-false item gives clues for correcting the item if it is false. These are much more difficult to construct, because you have to list the plausible choices for each true-false item. In the form illustrated in Sample 4, grading or giving of points for the responses could be a problem. One suggestion is to give each item, whether true or false, a value of 2. Recognition of a true statement is rewarded with 2 points; a value of 1 is given for recognizing a false statement, and a value of 1 is given for recalling the correct response. Notice that in both of these modifications, the word or words that make the statement true or false are underlined.



SAMPLE 3

MODIFIED TRUE-FALSE ITEM

Directions: Circle the (T) or (F) column to the left of each true (T) or false (F) statement. Then, if the statement is false, correct the statement in the space provided under each statement.

T F 1. The horizontal threads in fabric are called the warp threads.

Correct statement: _____

_____

SAMPLE 4

MODIFIED TRUE-FALSE ITEM

Directions: Circle the (T) or (F) column to the left of each true (T) or false (F) statement. Then, if the statement is false, select the correct alternative and place the letter in the space provided in the left-hand column.

T F 1. The primary colors are blue, green and yellow.

_____

a. green, orange and red
b. green, red and yellow
c. violet, yellow and red
d. orange, blue and violet
e. yellow, green and violet

Select one or more student performance objectives in your occupational specialty that require a student to recall and recognize information.

Construct ten true-false items to measure achievement of the student performance objective(s) you selected. Five of the items should be of the modified type. Number each test item for easy reference during feedback. Include directions and a scoring key.

You may want to ask one or more of your peers who have taken or are taking this module to critique the true-false test items you have constructed. Discuss any suggested changes, and then make any necessary revisions.

After you have constructed your true-false test items, use the Checklist for True-False Test Items, p. 35, to evaluate your work.

CHECKLIST FOR TRUE-FALSE TEST ITEMS

Directions: Place an X in the YES or NO box to indicate whether **all** test items met or did not meet each criterion. For any test item(s) which did not meet a criterion, specify the number(s) of the item(s) in the space provided for comments. If criterion #7 is not applicable, place an N/A in the space provided for comments.

Name _____

Date _____

Resource Person _____

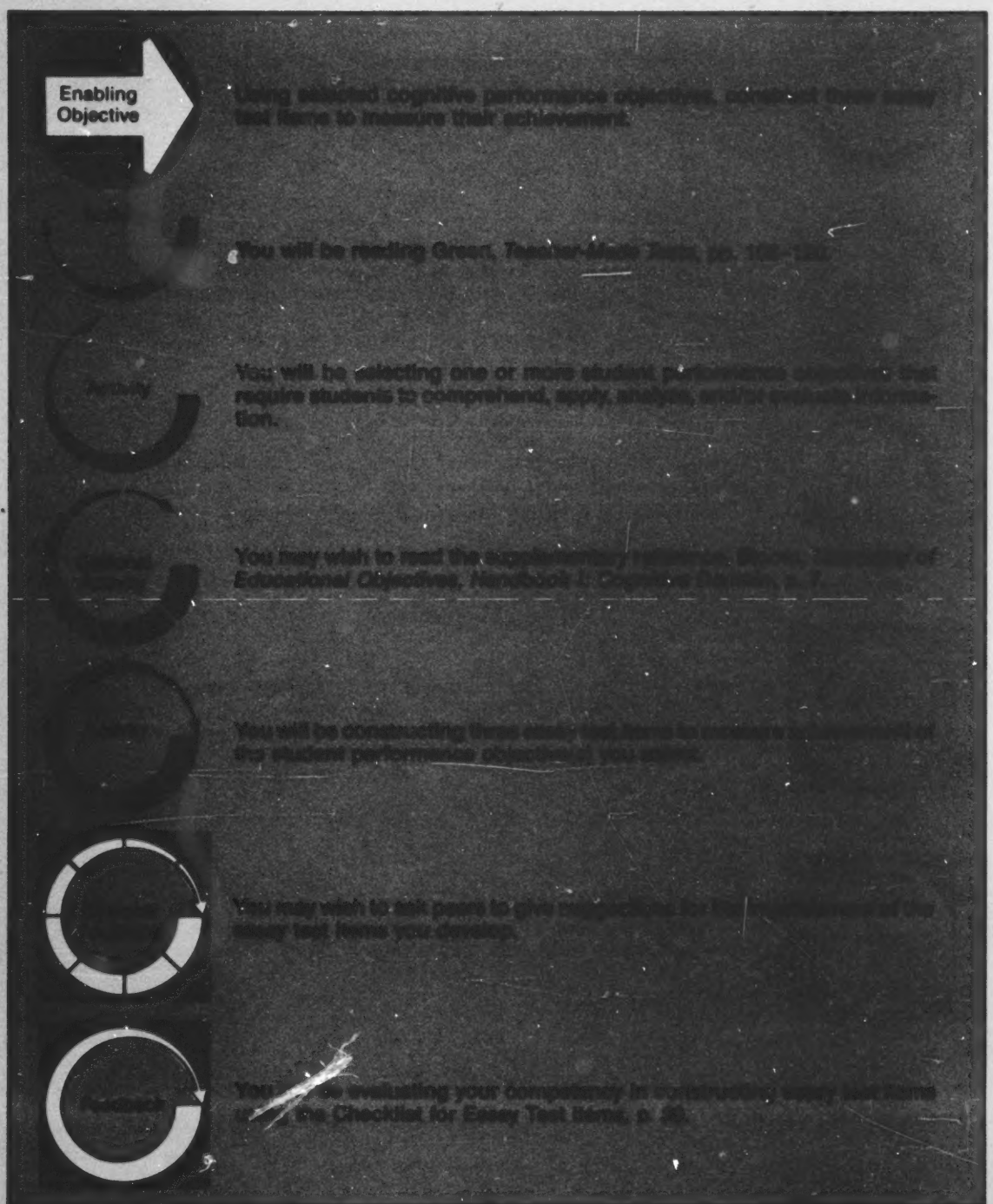
	Yes	No	Comments
The true-false test items meet the following criteria:			
1. All statements are entirely true or entirely false		☐	_____
2. No trivial details are used to make any of the statements false		☐	_____
3. The statements are concise without more elaboration than is necessary to give clear meaning		☐	_____
4. The statements have not been quoted from a textbook .		☐	_____
5. The statements avoid using specific determiners that signal the answers		☐	_____
6. The statements are in positive rather than negative terms		☐	_____
7. Authority(ies) are quoted when the item contains a controversial issue		☐	_____
8. A pattern of responses is avoided in the items		☐	_____
9. The responses for the group of items are written in a manner that makes scoring easy (column to the left) ...		☐	_____

LEVEL OF PERFORMANCE: All applicable items must receive YES responses. If any item receives a NO response, review Green, *Teacher-Made Tests*, pp. 63–68, revise your work accordingly, or check with your resource person if necessary.

NOTES

Learning Experience VI

OVERVIEW



For information on constructing essay test items, read Green, *Teacher-Made Tests*, pp. 108–120.

Select one or more student performance objectives in your occupational specialty that require a student to use the higher levels of knowing (comprehension, application, analysis, synthesis, evaluation).

You may wish to refer to Bloom, *Taxonomy of Educational Objectives, Handbook I: Cognitive Domain*, p. 7, for an explanation of the higher levels of knowing.

Construct three essay test items to measure achievement of the student performance objective(s) you selected. Number each test item for easy reference during feedback. Include directions and a scoring key.

You may want to ask one or more of your peers who have taken or are taking this module to critique the essay items you have constructed. Discuss any suggested changes, and then make any necessary revisions.

After you have constructed your essay test items, use the Checklist for Essay Test Items, p. 39, to evaluate your work.

CHECKLIST FOR ESSAY ITEMS

Directions: Place an X in the YES or NO box to indicate whether **all** test items met or did not meet each criterion. For any test item(s) which did not meet a criterion, specify the number(s) of the item(s) in the space provided for comments. If criteria #4 and #6 are not applicable, place an N/A in the space provided for comments.

Name _____

Date _____

Resource Person _____

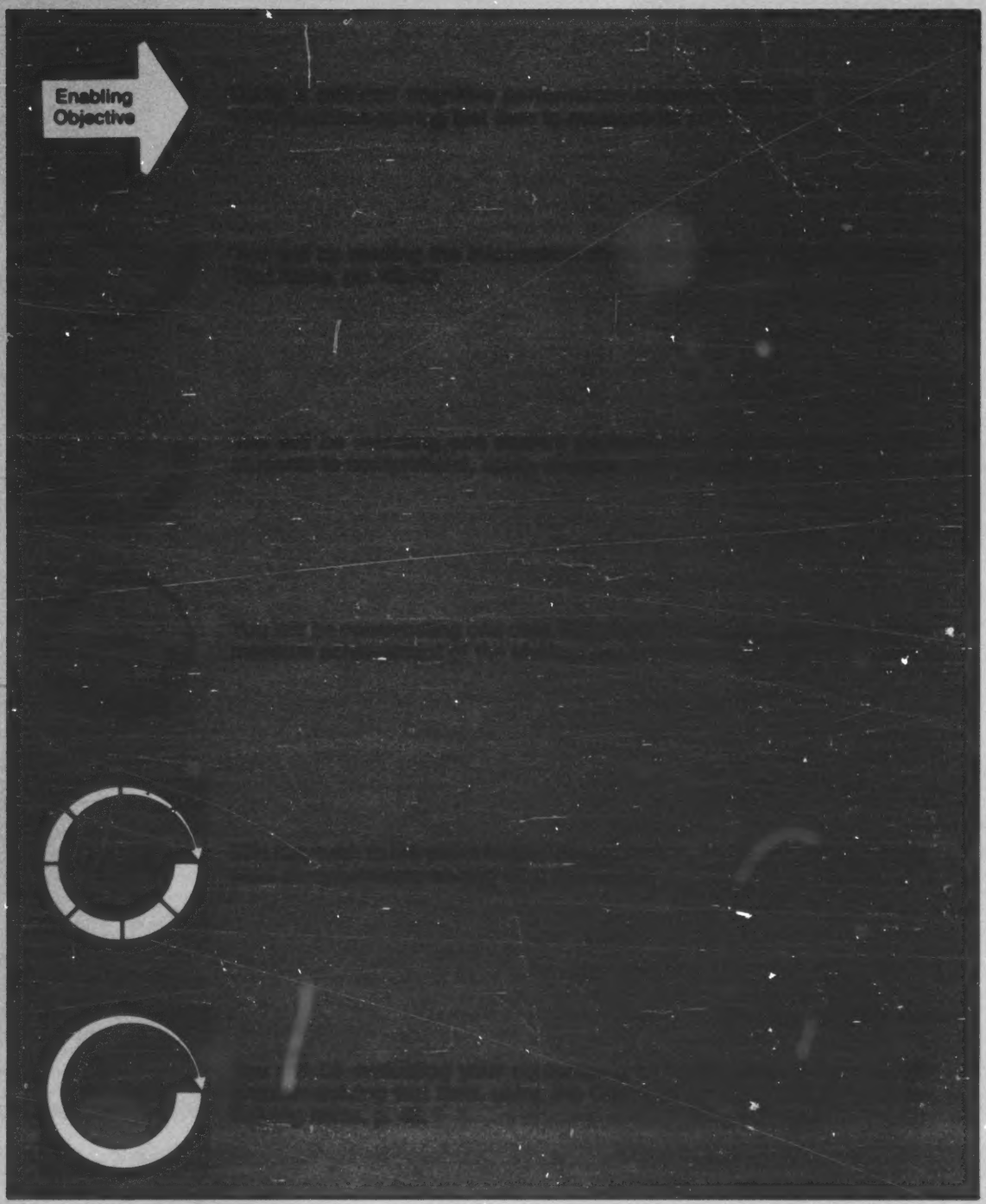
	Yes	No	Comments
The essay test items meet the following criteria:			
1. The language in each item is precise and unambiguous		☐	_____
2. The problems or tasks that the students are asked to do are clearly stated		☐	_____
3. The problems or tasks require students to use the higher levels of cognition		☐	_____
4. Any special conditions are stated		☐	_____
5. The items avoid the open-book type of situation		☐	_____
6. The items clarify any additional directions needed beyond the general set of directions		☐	_____

LEVEL OF PERFORMANCE: All applicable items must receive YES responses. If any item receives a NO response, review Green, *Teacher-Made Tests*, pp. 108–120, revise your work accordingly, or check with your resource person if necessary.

NOTES

Learning Experience VII

OVERVIEW



Activity

For information the the case study/problem-solving item as an evaluation technique, including the levels of knowledge it can evaluate, read the following information sheet:

CASE STUDY/PROBLEM-SOLVING TEST ITEMS

The **case study** or **problem-solving** technique is often used as a method of instruction. In addition, however, it can serve as an evaluation technique. As an evaluation technique, a case study or problem-solving item requires a student to **use** knowledge, not just recognize or recall knowledge. The case study/problem-solving item calls upon students to place themselves in a situation, or to react to a situation, in which their prior learning is required to solve the problem or evaluate the situation.

The case study/problem-solving statement could ask the student to **predict trends** or to **make inferences of consequences** (high-level types of knowing). For example, if you are teaching students the factors to consider in selecting an occupation, for evaluation purposes you may want to design a case study in which students would have to predict from the data presented which jobs will be available in the next two years.

You can also use case study/problem-solving items when the objective is to teach the **application** of principles, generalizations, and concepts. For example, you could ask the students what automotive repair principles they would use to solve a list of problem situations faced in an auto body shop. This type of case study/problem-solving item requires students to **apply** what they have learned.

Some objectives stress the ability of students to **analyze**—to break down material into its parts, detect relationships of the parts, and recognize the organizational principles of the structure as a whole. These require a higher level of knowing, and case study/problem-solving items are frequently used for evaluating student performance at this level. For example, if you wanted students in office machine repair to be able to troubleshoot (analyze) a defective calculating machine, you could develop a problem-solving item in which you list all the symptoms of a malfunctioning calculator, and then ask students to describe the probable cause of the trouble.

The case study/problem-solving item is also an excellent means of evaluating students' ability to **judge** (**evaluate** or **appraise**) ideas, methods, materials, solutions, etc. For example, achievement of objectives involving purchasing of goods and services can be evaluated through case study items, in that such objectives require a student to make value judgments.

The construction of case study/problem-solving items and the development of a key for grading involve considerable time and effort. The statement of the case study/problem-solving item should describe the situation, what the student is to do, and the end expectations. The following is an example of this type of test item.

Problem:

You are getting ready to purchase your first automobile. You have saved $1,200 during high school and your first year of employment. You don't know whether to purchase a new car or a used car. What would you do?

Task:

In answering the question, "What would you do?" please (1) write the steps you would take in reaching the answer, and (2) give

the reason for each step. A complete answer will be given 10 points on this examination.

Key:

Visit firms where money is loaned to discover interest rates. With $1,200 for down payment, it is probably better to buy a new car, for the going bank rate of interest on a loan is 11 percent for new cars and 15 percent for used cars. Or, visit auto dealers to discover whether you can get a quality car for $1,200 or less.

Some case study/problem-solving items could probably also be classified as essay items. The above example may be classified as an essay item built around a problem.

Select a student performance objective in your occupational specialty which requires a student to comprehend, analyze, synthesize and/or evaluate information to solve a problem.

Construct one case study/problem-solving test item that measures achievement of the student performance objective you selected. Include a scoring key.

You may want to ask one or more of your peers who have taken or are taking this module to critique the case study/problem-solving item you have constructed. Discuss any suggested changes, and then make any necessary revisions.

After you have constructed your case study/problem-solving item, use the Checklist for Case Study/Problem Solving Test Items, p. 45, to evaluate your work.

NOTES

CHECKLIST FOR CASE STUDY/PROBLEM-SOLVING TEST ITEM

Name _____

Date _____

Resource Person _____

Directions: Place an X in the YES or NO box to indicate whether the test item met or did not meet each criterion.

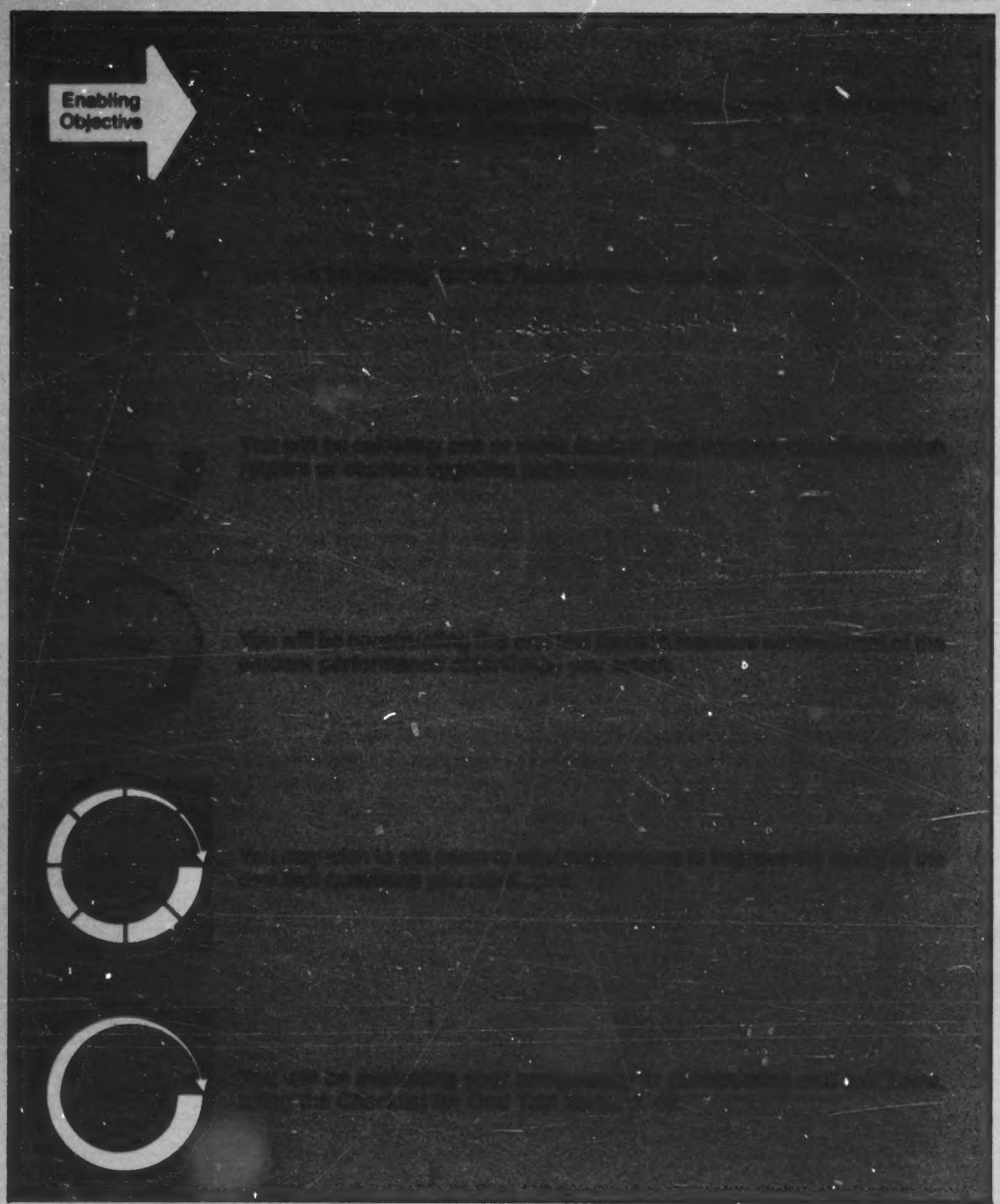
The case study/problem-solving item meets the following criteria:	**Yes**	**No**
1. The situation developed is directed toward evaluating achievement of the student performance objective		☐
2. The problem is practical and realistic		☐
3. The problem is worded at the students' comprehension level		☐
4. The problem requires students to comprehend prior learning, and to apply that learning, analyze that learning, or make judgments based on that learning		☐
5. The problem contains a clear statement of what students are to do		☐
6. The problem indicates the credit students will receive for the solution		☐

LEVEL OF PERFORMANCE: All items must receive YES responses. If any item receives a NO response, review the material in the information sheet, Case Study/Problem Solving Test Items, pp. 42–43, revise your work accordingly, or check with your resource person if necessary.

NOTES

Learning Experience VIII

OVERVIEW



For information pertaining to the use, construction, and administration of different kinds of oral tests, read Green, *Teacher-Made Tests*, pp. 122–133.

Select two or more student performance objectives in your occupational specialty the achievement of which can be assessed by use of oral testing. Select at least one objective which requires a higher level of knowing than recall and recognition.

Construct five oral test items (with an inflexible grading key for each item) to measure achievement of the student performance objectives you selected. Number each test item for easy reference during feedback.

You may wish to ask one or more of your peers who have taken or are taking this module to critique the oral test items you have developed. Discuss any suggested changes, and then make any necessary revisions.

After you have constructed your oral test items, use the Checklist for Oral Tests Items, p. 49, to evaluate your work.

CHECKLIST FOR ORAL TEST ITEMS

Name _____

Date _____

Resource Person _____

Directions: Place an X in the YES or NO box to indicate whether **all** test items met or did not meet each criterion. For any test item(s) which did not meet a criterion, specify the number(s) of the item(s) in the space provided for comments.

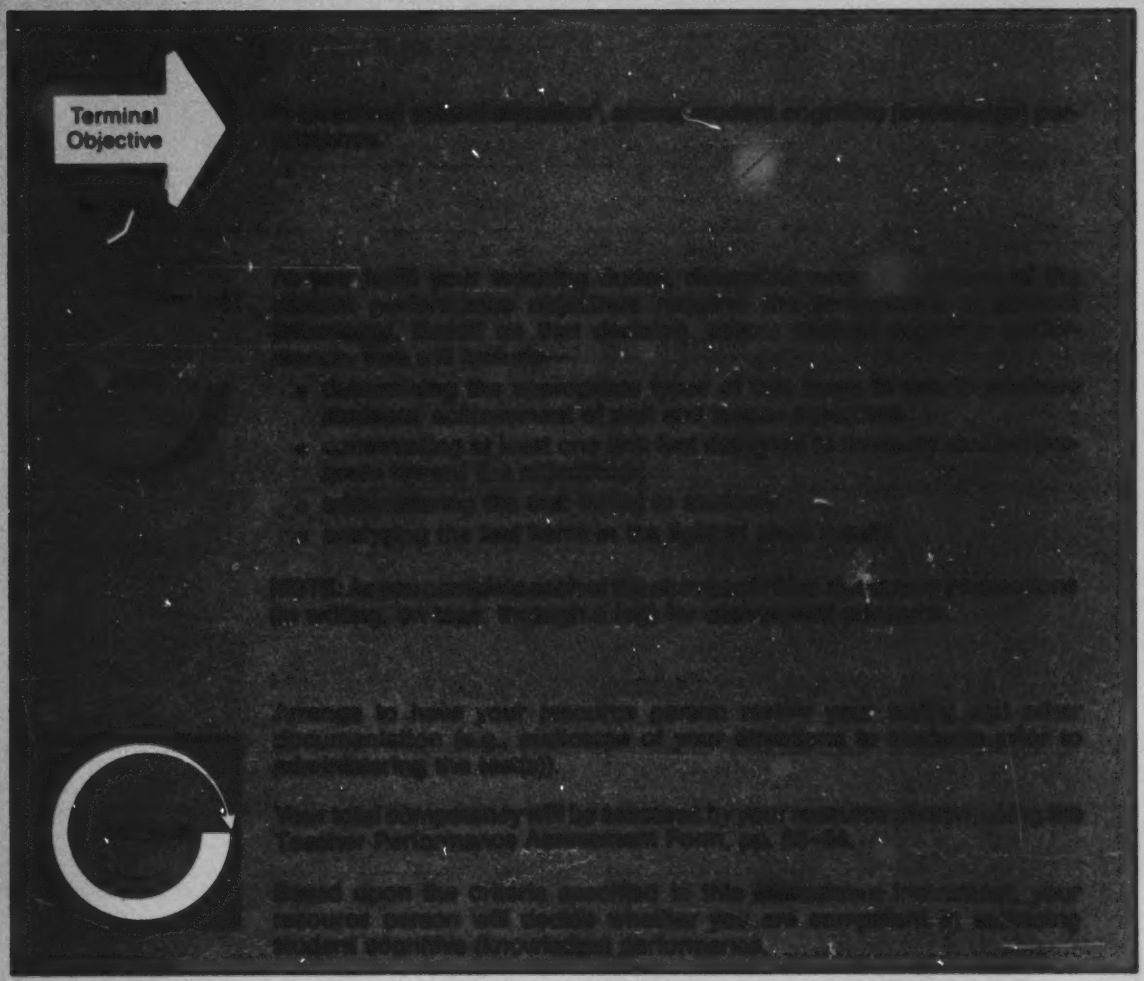
	Yes	No	Comments
The oral test items are:			
1. stated in a clear, concise manner		☐	_____
2. designed to elicit only the correct responses		☐	_____
3. stated so that the responses will measure achievement of the objective(s)		☐	_____
4. arranged in a logical sequence		☐	_____

LEVEL OF PERFORMANCE: All items must receive YES responses. If any item receives a NO response, review Green, *Teacher-Made Tests*, pp. 122–133, revise your work accordingly, or check with your resource person if necessary.

NOTES

Learning Experience IX

FINAL EXPERIENCE



*For a definition of "actual school situation," see the inside back cover.

NOTES

TEACHER PERFORMANCE ASSESSMENT FORM

Assess Student Performance: Knowledge (D–2)

Name _____

Date _____

Resource Person _____

Directions: Indicate the level of the teacher's accomplishment by placing an X in the appropriate box under the LEVEL OF PERFORMANCE heading. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

In developing a unit test(s) to assess student cognitive performance, the teacher:	LEVEL OF PERFORMANCE					
	N/A	None	Poor	Fair	Good	Excellent
1. identified objectives in the cognitive (knowledge) area	☐	☐	☐	☐		
2. identified types of test items appropriate for assessing the level of knowing implied in the performance objectives	☐	☐	☐	☐		
3. developed each test item according to the guidelines for constructing that type of test item	☐	☐	☐	☐		
4. constructed a test(s) which was:						
a. valid	☐	☐	☐	☐		
b. reliable	☐	☐	☐	☐		
c. objective	☐	☐	☐	☐		
d. discriminating	☐	☐	☐	☐		
e. comprehensive	☐	☐	☐	☐		
5. grouped together all test items of like type	☐	☐	☐	☐		
6. grouped together within each type the items relating to the same objective	☐	☐	☐	☐		
7. included no more than three or four different forms or types of test items	☐	☐	☐	☐		
8. grouped like items from easy to difficult	☐	☐	☐	☐		
9. included clear and concise directions for each different form or type of test item	☐	☐	☐	☐		
10. constructed the test so that recording responses was simple and consistent	☐	☐	☐	☐		
11. numbered items consecutively from the beginning to the end of the test	☐	☐	☐	☐		
12. developed an inflexible key for scoring	☐	☐	☐	☐		

In administering the test(s), the teacher:	N/A	None	Poor	Fair	Good	Excellent
13. arranged the physical environment so it was suitable for test-taking	☐	☐	☐	☐		
14. explained the use of the test to students in a non-threatening way	☐	☐	☐	☐		
15. informed the students how the test would be graded prior to their taking the test	☐	☐	☐	☐		
16. gave specific instructions for taking the test	☐	☐	☐	☐		
17. had all needed testing materials and supplies ready for distribution	☐	☐	☐	☐		
18. indicated approximate time needed to complete the test by sections and as a whole	☐	☐	☐	☐		
19. allowed sufficient time for the test to be completed by all or most students	☐	☐	☐	☐		
20. answered students' questions during the examination in a manner that did not disturb the total group	☐	☐	☐	☐		

LEVEL OF PERFORMANCE: All items must receive N/A, GOOD, or EXCELLENT responses. If any item receives a NONE, POOR, or FAIR response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

NOTES

ABOUT USING THE CENTER'S PBTE MODULES

Organization

Each module is designed to help you gain competency in a particular skill area considered important to teaching success. A module is made up of a series of learning experiences, some providing background information, some providing practice experiences, and others combining these two functions. Completing these experiences should **enable** you to achieve the **terminal** objective in the final learning experience. The final experience in each module always requires you to demonstrate the skill in an actual school situation when you are an intern, a student teacher, or an inservice teacher.

Procedures

Modules are designed to allow you to individualize your teacher education program. You need to take only those modules covering skills which you do not already possess. Similarly, you need not complete any learning experience within a module if you already have the skill needed to complete it. Therefore, before taking any module, you should carefully review (1) the Introduction, (2) the Objectives listed on p. 4, (3) the Overviews preceding each learning experience, and (4) the Final Experience. After comparing your present needs and competencies with the information you have read in these sections, you should be ready to make one of the following decisions:

- that you do not have the competencies indicated, and should complete the entire module
- that you are competent in one or more of the enabling objectives leading to the final learning experience, and thus can omit that (those) learning experience(s)
- that you are already competent in this area, and ready to complete the final learning experience in order to "test out"
- that the module is inappropriate to your needs at this time

When you are ready to take the final learning experience and have access to an actual school situation, make the necessary arrangements with your resource person. If you do not complete the final experience successfully, meet with your resource person and arrange (1) to repeat the experience, or (2) complete (or review) previous sections of the module or other related activities suggested by your resource person before attempting to repeat the final experience.

Options for recycling are also available in each of the learning experiences preceding the final experience. Any time you do not meet the minimum level of performance required to meet an objective, you and your resource person may meet to select activities to help you reach competency. This could involve (1) completing parts of the module previously skipped; (2) repeating activities; (3) reading supplementary resources or completing additional activities suggested by the resource person; (4) designing your own learning experience; or (5) completing some other activity suggested by you or your resource person.

Terminology

Actual School Situation . . . refers to a situation in which you are actually working with, and responsible for, secondary or post-secondary vocational students in a real school. An intern, a student teacher, or an inservice teacher would be functioning in an actual school situation. If you do **not** have access to an actual school situation when you are taking the module, you can complete the module up to the final learning experience. You would then do the final learning experience later; i.e., when you have access to an actual school situation.

Alternate Activity or Feedback . . . refers to an item or feedback device which may **substitute** for required items which, due to special circumstances, you are unable to complete.

Occupational Specialty . . . refers to a specific area of preparation within a vocational service area (e.g., the service area Trade and Industrial Education includes occupational specialties such as automobile mechanics, welding, and electricity).

Optional Activity or Feedback . . . refers to an item which is not required, but which is designed to **supplement** and enrich the required items in a learning experience.

Resource Person . . . refers to the person in charge of your educational program; the professor, instructor, administrator, supervisor, or cooperating/supervising/classroom teacher who is guiding you in taking this module.

Student . . . refers to the person who is enrolled and receiving instruction in a secondary or post-secondary educational institution.

Vocational Service Area . . . refers to a major vocational field: agricultural education, business and office education, distributive education, health occupations education, home economics education, industrial arts education, technical education, or trade and industrial education.

You or the Teacher . . . refers to the person who is taking the module.

Levels of Performance for Final Assessment

N/A . . . The criterion was not met because it was **not applicable** to the situation.
None . . . **No attempt** was made to meet the criterion, although it was relevent.
Poor . . . The teacher is unable to perform this skill or has only **very limited ability** to perform it.
Fair . . . The teacher is unable to perform this skill in an acceptable manner, but has **some ability** to perform it.
Good . . . The teacher is able to perform this skill in an **effective** manner.
Excellent . . . The teacher is able to perform this skill in a **very effective** manner.

Titles of The Center's Performance-Based Teacher Education Modules

Category A: Program Planning, Development, and Evaluation

A-1 Prepare for a Community Survey
A-2 Conduct a Community Survey
A-3 Report the Findings of a Community Survey
A-4 Organize an Occupational Advisory Committee
A-5 Maintain an Occupational Advisory Committee
A-6 Develop Program Goals and Objectives
A-7 Conduct an Occupational Analysis
A-8 Develop a Course of Study
A-9 Develop Long-Range Program Plans
A-10 Conduct a Student Follow-Up Study
A-11 Evaluate Your Vocational Program

Category B: Instructional Planning

B-1 Determine Needs and Interests of Students
B-2 Develop Student Performance Objectives
B-3 Develop a Unit of Instruction
B-4 Develop a Lesson Plan
B-5 Select Student Instructional Materials
B-6 Prepare Teacher-Made Instructional Materials

Category C: Instructional Execution

C-1 Direct Field Trips
C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
C-4 Direct Students in Instructing Other Students
C-5 Employ Simulation Techniques
C-6 Guide Student Study
C-7 Direct Student Laboratory Experience
C-8 Direct Students in Applying Problem-Solving Techniques
C-9 Employ the Project Method
C-10 Introduce a Lesson
C-11 Summarize a Lesson
C-12 Employ Oral Questioning Techniques
C-13 Employ Reinforcement Techniques
C-14 Provide Instruction for Slower and More Capable Learners
C-15 Present an Illustrated Talk
C-16 Demonstrate a Manipulative Skill
C-17 Demonstrate a Concept or Principle
C-18 Individualize Instruction
C-19 Employ the Team Teaching Approach
C-20 Use Subject Matter Experts to Present Information
C-21 Prepare Bulletin Boards and Exhibits
C-22 Present Information with Models, Real Objects, and Flannel Boards
C-23 Present Information with Overhead and Opaque Materials
C-24 Present Information with Filmstrips and Slides
C-25 Present Information with Films
C-26 Present Information with Audio Recordings
C-27 Present Information with Televised and Videotaped Materials
C-28 Employ Programmed Instruction
C-29 Present Information with the Chalkboard and Flip Chart

Category D: Instructional Evaluation

D-1 Establish Student Performance Criteria
D-2 Assess Student Performance: Knowledge
D-3 Assess Student Performance: Attitudes
D-4 Assess Student Performance: Skills
D-5 Determine Student Grades
D-6 Evaluate Your Instructional Effectiveness

Category E: Instructional Management

E-1 Project Instructional Resource Needs
E-2 Manage Your Budgeting and Reporting Responsibilities
E-3 Arrange for Improvement of Your Vocational Facilities
E-4 Maintain a Filing System
E-5 Provide for Student Safety
E-6 Provide for the First Aid Needs of Students
E-7 Assist Students in Developing Self-Discipline
E-8 Organize the Vocational Laboratory
E-9 Manage the Vocational Laboratory

Category F: Guidance

F-1 Gather Student Data Using Formal Data-Collection Techniques
F-2 Gather Student Data Through Personal Contacts
F-3 Use Conferences to Help Meet Student Needs
F-4 Provide Information on Educational and Career Opportunities
F-5 Assist Students in Applying for Employment or Further Education

Category G: School-Community Relations

G-1 Develop a School-Community Relations Plan for Your Vocational Program
G-2 Give Presentations to Promote Your Vocational Program
G-3 Develop Brochures to Promote Your Vocational Program
G-4 Prepare Displays to Promote Your Vocational Program
G-5 Prepare News Releases and Articles Concerning Your Vocational Program
G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program
G-7 Conduct an Open House
G-8 Work with Members of the Community
G-9 Work with State and Local Educators
G-10 Obtain Feedback about Your Vocational Program

Category H: Student Vocational Organization

H-1 Develop a Personal Philosophy Concerning Student Vocational Organizations
H-2 Establish a Student Vocational Organization
H-3 Prepare Student Vocational Organization Members for Leadership Roles
H-4 Assist Student Vocational Organization Members in Developing and Financing a Yearly Program of Activities
H-5 Supervise Activities of the Student Vocational Organization
H-6 Guide Participation in Student Vocational Organization Contests

Category I: Professional Role and Development

I-1 Keep Up-to-Date Professionally
I-2 Serve Your Teaching Profession
I-3 Develop an Active Personal Philosophy of Education
I-4 Serve the School and Community
I-5 Obtain a Suitable Teaching Position
I-6 Provide Laboratory Experiences for Prospective Teachers
I-7 Plan the Student Teaching Experience
I-8 Supervise Student Teachers

Category J: Coordination of Cooperative Education

J-1 Establish Guidelines for Your Cooperative Vocational Program
J-2 Manage the Attendance, Transfers, and Terminations of Co-Op Students
J-3 Enroll Students in Your Co-Op Program
J-4 Secure Training Stations for Your Co-Op Program
J-5 Place Co-Op Students on the Job
J-6 Develop the Training Ability of On-the-Job Instructors
J-7 Coordinate On-the-Job Instruction
J-8 Evaluate Co-Op Students' On-the-Job Performance
J-9 Prepare for Students' Related Instruction
J-10 Supervise an Employer-Employee Appreciation Event

RELATED PUBLICATIONS

Student Guide to Using Performance-Based Teacher Education Materials
Resource Person Guide to Using Performance-Based Teacher Education Materials
Guide to the Implementation of Performance-Based Teacher Education

For information regarding availability and prices of these materials contact—

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